



# UNITED STATES PATENT AND TRADEMARK OFFICE

5E  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,472	09/17/2001	Hing Wing To	3882/11A	7746

29858 7590 01/26/2005

BROWN, RAYSMAN, MILLSTEIN, FELDER & STEINER LLP  
900 THIRD AVENUE  
NEW YORK, NY 10022

EXAMINER

DINH, KHANH Q

ART UNIT PAPER NUMBER

2151

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/955,472

**Applicant(s)**

TO ET AL.

**Examiner**

Khanh Dinh

**Art Unit**

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/4/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1-12 are presented for examination.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by  
Rekhter, US Pat. No.5,964,841.

As to claim 1, Rekhter discloses a method for resolving anomalies within a network topology map (a list of neighboring nodes adjacent to the router to generate a map of the topology of the network, see col.2 lines 18-46 and col.5 lines 3-14), the method comprising:

identifying a conflicting link within a received topology map (detecting an inconsistency state in routing packets), the conflicting link comprising a source and one or more conflicting destinations (see fig.2, col.5 line 52 to col.6 line 67), resolving the conflicting link through the use of one or more virtual devices (executing a link state algorithm) within the topology map and replacing the conflicting link with a link to a virtual device based upon the resolution of the conflicting link (see fig.3, col.7 lines 1-42).

Art Unit: 2151

As to claim 2, Rekhter discloses determining a number of conflicting destinations from the source of the conflicting link, resolving the source of the conflicting link and resolving the conflicting destination (see fig.4, col.7 line 43 to col.8 line 55).

As to claims 3 and 4, Rekhter discloses identifying a link between two virtual devices; and merging the virtual devices and locating two or more entries in a link table showing the source to be linked to two or more different destinations (calculating paths through the network topology to determine which one of the two destinations station will receive the packet, see figs.3, 4, col.6 lines 10-51 and col.7 lines 1-67).

As to claims 5 and 6, Rekhter discloses grouping together entries in the link table having the same source into a conflict group and replacing the conflicting link with a link to the virtual device comprises removing the conflicting link from the link table and inserting the link to the virtual device in a virtual link table (see col.7 lines 1-67 and col.8 lines 39-67).

As to claim 7, Rekhter discloses generating a virtual link table for storing one or more links to virtual devices (see fig.4, col.6 lines 10-51 and col.7 line 43 to col.8 line 55).

As to claim 8, Rekhter discloses first determining whether the source or a destination in the conflicting link is linked to a first virtual device and replacing the conflicting link with a link to a virtual device only if neither the source nor a destination is linked to the first

Art Unit: 2151

virtual device (calculating paths through the network topology to determine which one of the two destinations station will receive the packet from the source device, see figs.3, 4, col.6 lines 10-51 and col.7 lines 1-67).

As to claim 9, Rekhter discloses determining whether the source or destination is linked to a virtual device comprising first determining whether the source is linked to a virtual device then determining whether a destination in the conflicting link is linked to a virtual device (see figs.3, 4, col.6 lines 10-51 and col.7 lines 1-67).

As to claims 10 and 11, Rekhter discloses if the source is linked to a first virtual device, replacing the source with the first virtual device and if a destination in the conflicting link is linked to a first virtual device, creating a link from the source to the first virtual device if the source in the conflicting link is not a virtual device (see figs.3, 4, col.6 lines 10-51 and col.7 lines 1-67).

As to claim 12, Rekhter discloses a computer readable medium storing a data structure representing a virtual link table, the data structure comprising:

one or more entries showing a link between a source device (202 fig.2) in a network and a first virtual device, the source device (202 fig.2) being identified in a received topology map of a network and the first virtual device not being identified in the received topology map (see figs.2, 3, using a list of neighboring nodes adjacent to the

router to generate a map of the topology of the network, see col.2 lines 18-46 and col.5 line 52 to col.6 line 67);

one or more entries showing a link between a destination device (204 fig.2) in the network and the first virtual device, the destination device (204 fig.2) being identified in the received topology map (executing a link state algorithm) and the virtual link table data structure being used by an executable program to display an improved topology map of the network (calculating paths through the network topology to determine which destination station will receive the packet, see figs.3, 4, col.6 lines 10-51 and col.7 lines 1-67).

***Other prior art cited***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. McNamara, US pat. No.6,262,976.
- b. Wong et al, US pat. No.6,363,077.
- c. Campbell et al, US pat. No.5,371,744.
- d. Perlman et al, US pat. No.5,742,820.
- e. Datta et al., US pat. No.6,493,341.

**Conclusion**

5. Claims 1-12 are rejected.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (571) 272-3936. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on (703) 272-3939. The fax phone number for this group is (703) 872-9306.

*A shortened statutory period for reply is set to expire THREE months from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned (35 U. S. C. Sect. 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(A).*

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/955,472

Page 7

Art Unit: 2151

A handwritten signature in black ink, appearing to read "Khanh", with a stylized flourish at the end.

Khanh Dinh  
Patent Examiner  
Art Unit 2151  
1/22/2005